

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-002502**Date Inspected:** 10-May-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2230**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Zhao Chen Sun**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG/Tower**Summary of Items Observed:**

On this date, Caltrans Office of Structural Materials (OSM) Quality Assurance (QA) Inspector Edward Leach was present to randomly observe and document the welding and Quality Control (QC) functions performed by ZPMC personnel relative to the fabrication of SAS Superstructure project. While on site, the QA Inspector noted the following work.

Bay 8

The QA Inspector witnessed ZPMC personnel performing ultrasonic testing (UT) for a complete joint penetration (CJP) weld splice on two each internal tower diaphragm plates. The QA Inspector identified the piece mark identifications as SSD1-SA126A-1B for a 45mm thick plate and SA290 (E)-12A, P308 (E)-1, 75mm plate. Upon completion of testing, both welds were accepted by ZPMC. The QA Inspector also performed UT for approximately 10% of the weld length for each weld. At the time of testing no relevant indications were noted. The QA Inspector generated a TL-6027 UT report for these items.

Also in bay 8 the QA Inspector observed fabrication for a flange reinforcement diaphragm plate designated as SSD1-SA326-8A (8B), member ID #6545. There was no ZPMC personnel present performing welding at the time of observation but it appeared that the welding was still in process for this assembly.

Bay 7

The QA Inspector observed ZPMC UT personnel perform UT on a CJP skewed T joint located on the floor beam sub-assembly. A total of four weld joints were tested and are designated as SSD11-DP021-132, SSD10-PP020-132, SSD11A-PP021-006 and SSD10-PP020-005. Upon completion of testing ZPMC UT personnel accepted SSD11A-PP021-006 and SSD10-PP020-132. Weld joint SSD11-DP021-132 was said to be

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rejectable and SSD10-PP020-005 was still in process. The QA Inspector performed UT for the two weld joint designations that were accepted by ZPMC. The full weld length (135mm) was examined with a 70 degree shear wave transducer from side A. No relevant indications were noted upon completion of testing.

Also in bay 7, the QA Inspector performed 10% ultrasonic testing (UT) verification after UT acceptance by ZPMC QC personnel for one (1ea) diaphragm plate designated as FB011-003-026. The QA Inspector observed that the adjoining members were of different thicknesses with the thicker member at 30mm and the thinner member at 12mm. The weld between the two members is an 1800 mm transitional complete joint penetration (CJP) butt weld splice. The QA Inspector performed UT for approximately 200mm of the weld length on each plate using a 70 degree shear wave transducer. On this same member, the QA Inspector observed that ZPMC had performed UT for CJP butt splice FB011-003-021 and rejected the weld for relevant indications. The QA Inspector generated a TL-6027 UT report for the items listed above.

Bay 4

The QA Inspector witnessed ZPMC personnel perform magnetic particle testing (MT) for a root pass that was completed on several CJP butt joint weld splices for 45mm tower diaphragm plates. The weld joints where the MT took place are designated as ESD1-SA313-14 (16) & 16 (15), SSD1-SA291-16 (15) & 14 (13), NSD1-SA19-14(15) & 16(15), WSD1-SA315-10(9) & 2(1). The QA Inspector observed ZPMC CWI personnel Zhao Chen Sun perform a visual inspection for each weld joint prior to MT. It was noted that ZPMC found no relevant indications upon completion of testing.

The following pictures below detail some of the work in progress on this date.



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Summary of Conversations:

No relevant conversations this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Leach,Ed	Quality Assurance Inspector
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Reviewed By:	Carreon,Albert	QA Reviewer
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